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<b>Notice of Allowability</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/607,982		LIU, YUE	
	<b>Examiner</b>		<b>Art Unit</b>	
	Bernard E. Souw		2881	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE 05/02/2005.
2. ☒ The allowed claim(s) is/are 1,2,4-11 and 13-24.
3. ☒ The drawings filed on 30 June 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>1/24/05 + 5/2/05</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                                       | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other _____   |

## DETAILED ACTION

### ***EXAMINER'S AMENDMENT***

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this Examiner's Amendment has been given during a phone conversation with applicant's attorney, Mr. William J. Athay, Reg. No. 44,515, on May 26, 2005.

#### **In the claims:**

In claim 24, line 1, after "according to", delete [claim 24] and insert **--claim 18--**.

### ***Information Disclosure Statement***

2. Receipt is acknowledged of information disclosure statements (IDSs) submitted on 01/24/2005 and 05/02/2005. Each submission is in compliance with the provisions of 37 CFR 1.97.

Signed copies of the information disclosure statement are here enclosed.

### ***Continued Examination Under 37 CFR 1.114***

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

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application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/02/2005 has been entered.

### ***Applicant's Amendment***

4. The Amendment filed 05/02/2005 has been entered. The present Office Action is made with all the arguments being fully considered.

Claims 1, 10, 18, 20 and 22-24 have been amended.

Claims 3 and 12 have been cancelled.

Claims 1, 2, 4-11 and 13-24 remain pending in this office action.

### ***ALLOWANCE***

5. Applicant's amendment has brought the independent claims 1, 10 and 18 to the condition of allowance.

Claims 1, 2, 4-11 and 13-24 are allowed.

The claims are subsequently renumbered to claims 1-22.

### ***Reasons for Allowance***

6. The following is an examiner's statement of reasons for allowance:

An opto-electronic housing, comprising a planar submount having a plurality of conductive traces on a planar surface thereof; a metallic can attached to the planar

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surface of said submount forming a cavity; a transparent window in or covering said opening and attached to said can; wherein said plurality of conductive traces extend along the planar surface of the submount from inside the cavity to beyond the can, as recited in claim 1, has not been anticipated or rendered obvious by any prior art.

An opto-electronic device, comprising a planar submount having a planar surface; a plurality of thru-via conductive contacts passing through said planar surface; a plurality of opto-electronic devices mounted directly or indirectly on said submount; a metallic can attached to the planar surface of said submount forming a cavity, wherein said can includes an opening for light to pass through and a transparent window in or covering said opening; wherein said cavity extends over said opto-electronic devices and said conductive contacts, wherein said cavity is hermetically sealed, as recited in claim 10, has not been anticipated or rendered obvious by any prior art.

An opto-electronic housing, comprising a planar submount holding an array of opto-electronic devices; a metallic support comprising a central body, parallel legs, and guide pins, wherein said support is attached to said planar submount and forms a cavity with an opening for light to pass through; and a transparent window in or covering said opening and attached to said support; wherein a hermetically sealed cavity is formed; wherein a flexible ribbon-type optical cable having a plurality of optical fibers and openings that align with the guide pins can be mounted between said parallel legs, said guide pins fitting into said openings when the flexible ribbon-type optical cable is attached to said support, as recited in claim 18, has not been anticipated or rendered obvious by any prior art.

Claims 2, 4-9, 11, 13-17 and 19-24 are also allowed because of its/their dependencies, either directly or indirectly, upon claims 1, 10 or 18.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Relevant Prior Art***

8. This prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

(a) USPAT # 6,597,713, issued to Ouchi, is found to disclose an opto-electronic housing with a cap enclosure similar to the present disclosure. However, none of Ouchi's embodiments have a metallic can/enclosure forming a cavity.

(b) USPAT # 6,604,488 issued to Brand et al. provides a metallic enclosure for an opto-electronic device. Even if combined with Ouchi's in a §103 rejection (see rejections of claims 3 and 12 in the previous Office Action), the combination Ouchi's and Brand's still does not meet the obviousness criterion. Specifically regarding present claim 1, Ouchi's prior art as shown in Fig.6 does not have conductive traces extending along the planar surface of the submount from inside the cavity to beyond the can, which is in the present case of metallic cap made possible by adding an insulator (not shown in Fig.4 of the present disclosure) that electrically isolates the metal can 312 from the

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conductive patterns 306, as recited in the specification in sect.[0047], lines 4-5. Ouchi's other embodiments shown in Figs. 19 and 21-23 do have conductive traces 112 extending along the planar surface of the submount from inside the cavity to beyond the can/enclosure 140. However, Ouchi's enclosure 140 is not metallic can, but a heat sink made of ceramic, as recited by Ouchi in Col.15/lines 56-60. Specifically regarding claim 18, none of Ouchi's embodiments suggests a metallic support that both provides a framework for mounting and aligning a flexible ribbon type connector and also provides for a structure forming a cavity and housing opto-electronic devices.

(c) USPGPUB #2003/0015776 issued to Recktenwald et al. provides a support having parallel legs 28 (=receptable connector) and guide pins 30 (=press-fit tails) attached to the device 10 (hence, to the submount of the VCSEL), and a flexible ribbon type connector 24 having a plurality of optical fibers and openings that are aligned with, and fitted into the guide pins 30, as recited in Sect.(0022) and disclosed in Fig.3-4 (see previous Office Action). However, even in combination with Ouchi's in a §103 rejection, the combination Ouchi's and Recktenwald's still does not meet the obviousness criterion for rejecting claim 18, since none of them provides a metallic support that forms a hermetically sealed cavity and housing for opto-electronic devices.

### ***Communications***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard E Souw whose telephone number is 571 272

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2482. The examiner can normally be reached on Monday thru Friday, 9:00 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on 571 272 2477. The central fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communications as well as for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

bes  
May 26, 2005

  
JOHN R. LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800